

**What is claimed:**

1. A method of calibrating a system for detecting a location of a potential breach along a security fence, the method comprising the steps of:

providing a fiber optic cable along the security fence, with a light transmission and reception device attached to one end of the fiber optic cable;

having a person move along the security fence;

having the person interrupt light traveling through the fiber optic cable at a certain position;

taking note of a ground distance between a reference point and the certain position;

sensing the interruption in the fiber optic cable at the light transmission and reception device;

determining an associated cable length existing between the light transmission and reception device and the interruption in the fiber optic cable; and

recording the ground distance and the associated cable length in a memory.

2. The method according to claim 1, wherein the person takes note of the ground distance, and is considered to be a first person, and further comprising the steps of:

the first person contacting a second person;

the second person receiving communications from the light transmission and reception device;

the first person sending information to the second person including the ground distance; and

the second person entering the ground distance and the associated cable length into the memory via a controller.

3. The method according to claim 2, wherein the second person manually enters at least one of the ground distance and the associated length into the memory via a keyboard connected to the controller.
4. The method according to claim 2, wherein the second person verbally enters at least one of the ground distance and the associated length into the memory via a microphone and voice recognition software ran by the controller.
5. The method according to claim 2, wherein the first person contacts the second person via a wireless communications device.
6. The method according to claim 1, further comprising the steps of:
  - providing the person who interrupts light traveling in the fiber optic cable with a first wireless communications device;
  - providing a second wireless device connected to a controller, the light transmission and reception device and the memory;
  - transmitting the ground distance from the first wireless communications device to the second wireless communications device; and
  - the second wireless communications device providing the ground distance to a controller which stores the ground distance and the associated cable length in the memory.
7. The method according to claim 1, further comprising the steps of:
  - providing the person who interrupts light traveling in the fiber optic cable with a first wireless communications device connected to a controller;

connecting a second wireless communications device to the light transmission and reception device;

transmitting the associated cable length from the second wireless communications device to the first wireless communications device;

the first wireless communications device providing the associated cable length to the controller; and

the controller storing the ground distance and associated cable length in the memory.

8. The method according to claim 5, wherein the ground distance is manually input into the first wireless communications device by the first person, and wherein the first person interrupts light traveling through the fiber optic cable by bending the cable.

9. The method according to claim 5, wherein the ground distance is automatically input into the first wireless communications device by an output of a global positioning system (GPS) connected to the first wireless communications device.

10. The method according to claim 1, wherein the transmission and reception device is an ODTR.

11. The method according to claim 1, wherein the reference point is the start of the security fence.

12. The method of claim 1, further comprising:

having the person interrupt light traveling through the fiber optic cable at different certain positions at different ground distances, in order to record a table of linked values of ground distances and associated cable lengths in the memory.

13. A calibration system for calibrating a monitoring system for detecting a location of a potential breach along a security fence, the calibration system comprising:

a fiber optic cable ran along a security fence;

a light transmission and reception device attached to one end of said fiber optic cable;

a controller attached to said light transmission and reception device;

a first wireless communications device operated by a first person moving along the security fence, after the first person interrupts light traveling through said fiber optic cable at a certain position, said first wireless communications device transmitting a ground distance from a reference point to the certain position;

a second wireless communications device receiving the ground distance from said first wireless communications device; and

a memory connected to said controller, wherein said light transmission and reception device in cooperation with said controller determines an associated cable length existing between the light transmission and reception device and the interruption in the cable, and wherein said controller stores the ground distance and the associate cable length in said memory.

14. The system of claim 13, wherein said second wireless communication device is operated by a second person, who inputs the ground distance into said controller.

15. The system of claim 13, wherein said second wireless communications unit is connected to said controller.
16. The system of claim 13, wherein said first wireless communications unit includes a global positioning system (GPS) unit to determine the ground distance from the reference point.
17. An operating method for a security fence monitoring system comprising:
  - constantly monitoring an output of a light transmission and reception device to determine a time delay of a light signal passing through a fiber optic cable attached to a security fence;
  - if the time delay varies outside of a threshold value, issuing an alarm signal, and
  - converting the time delay provided by the transceiver into a cable length value;
  - comparing the cable length value to a lookup table stored in a memory;
  - determining a zone of a potential breach point; and
  - calculating an approximate location of the potential breach within the zone.
18. The method of claim 17, wherein the alarm signal causes activation of a visual or audible alarm device.
19. The method of claim 17, wherein the alarm signal and the zone of the potential breach point are sent to a remote monitoring station.

20. The method of claim 17, wherein said step of calculating the approximate location of the potential breach within the zone includes determining an average weave pattern density of the fiber optic cable for the zone.